

B2 shows that the anti-sense strand of a target gene usually encodes complementary peptide to the target protein/peptide. Anti-sense peptides which are complementary to the target protein/peptide are called complementary anti-sense peptides.

Starting on page 9, line 30 and ending on page 10, line 4 replace the paragraph with:

B3 Phage fUSE5 is used as the vector for the cTCL. The library is made by ligation of synthetic degenerate BglII deoxyoligonucleotides fragments into the Sfi I site of the fUSE5, and transfection of *E. coli* with the ligation products by electroporation. The fUSE5 vector and the cloning procedure is described in detail in ref. 71, 72 and 89. The synthetic degenerate BglII deoxyoligonucleotides fragments are synthesized by solid-phase phosphoramidite chemistry (90), and carry the following sequence:

5'-CTGTCAGGGCCCGAGGGGCT (SEQ. ID. NO. 7)

(XXX)_nGGGGCCGCTGCGGCCTGTCAGG-3' (SEQ ID NO. 8)

Starting on page 12, line 12 and ending on page 1, line 24 replace the paragraph with:

B4 Human rhinoviruses cause about 70% of common cold. ICAM-1 serves as the cellular receptor for majority of HRVs (82). The extracellular part of the ICAM-1 molecule is composed by five immunoglobulin-like domains (D1-D5). Mutational analysis of ICAM-1 has shown that domain D1 contains the primary binding site for rhinoviruses as well as the binding site for its natural ligand lymphocyte function-associated antigen 1 (LFA-1) (83-86). The regions in D1 which have been implicated as the contact sites with HRVs include residues 1, 2, 24-29, 40-49, and 70-77 (83-87). Accordingly, peptide ligands of ICAM-1 targeting these regions may prevent the binding of HRVs to ICAM-1. Suitable peptide targets include, but are not limited to the following:

Residues 1-5: QTSVS (SEQ ID NO. 9)

Residues 24-29: SCDQPK (SEQ ID NO. 10)

Residues 40-49: KELLPGNNR (SEQ ID NO. 11)

Residues 70-77: PDGQSTAK (SEQ ID NO. 12)

Starting on page 14, line 21 and ending on page 14, line 31 replace the paragraph with:

Based on their sequences, the heavy chain (H) of an antibody can be classified into six families (V_H1 to V_H6). The general sequences of FR2 region in each family are in the following:

V_H1: W V R/Q Q A P/H/T G/A K/Q G/E/R/A L E/G W M/I G (SEQ ID NO. 13)

V_H2: W I R Q P P G K A L E W L A (SEQ ID NO. 14)

V_H3: W V/I R/H Q A P/Q G K G L/P E/V W/Y/L V S/A/G (SEQ ID NO. 15)

V_H4: W I/V R Q P P G K G L E W I G (SEQ ID NO. 16)

V_H5: W V R Q M P G K G/E L E W M G (SEQ ID NO. 17)

V_H6: W I R Q S P S R G L E W L G (SEQ ID NO. 18)

The sequence of the light chain (L) of an antibody is:

V_L kappa: W Y Q Q K P G Q/K P/S/A P K L L I Y (SEQ ID NO. 19)

Starting on page 15, line 5 and ending on page 15, line 6 replace the paragraph with:

Peptide 1 (binds to FR2 in V_H5): P D A L H G P F A Q(or D) L P H P (SEQ ID NO. 20)

Starting on page 15, line 7 and ending on page 15, line 8 replace the paragraph with:

Peptide 2 (binds to FR2 in V_H3, V_H4 and V_H6): P D A L G/R G P F A Q/D L P N P (SEQ ID NO. 21)

Starting on page 15, line 9 and ending on page 15, line 10 replace the paragraph with:

Peptide 3 (binds to FR2 in V_L kappa chain): P V L L F R P L R G F E E D I (SEQ ID NO. 22)

Starting on page 15, line 23 and ending on page 15, line 29 replace the paragraph with:

Approximately 50 ng of the mixed template is boiled with 1 pmol of the primer No. 1 (5'-GACGTGGCCN₆-3 (SEQ ID NO. 23), N can be A, T, C, or G) for 3 min, cooled on ice, mixed with a reaction mixture containing 10 mM Tris.HCl (pH 7.5), 10 mM MgCl₂, 1 mM dithiothreitol, 0.125 mM each dNTP, and 2.5 units of Klenow fragment of DNA polymerase and incubated at 37°C for 15 min. Then the reaction mixture is boiled and cooled again, another 2.5 units of Klenow fragment is added, and the reaction mixture is incubated at 37°C for 15 min.

Starting on page 15, line 30 and ending on page 16, line 5 replace the paragraph with:

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The reaction is stopped by boiling and diluted 1:10 with TE buffer and products are separated from primers using Microcon-100 microconcentrators (Amicon) with two washes of the retained solution with 200 ml of the TE buffer. After two cycles of priming, some reaction products will incorporate primer sequences at both ends. They are amplified in PCR using primer No. 2 (5'-GGCCGACGTGGCC-3') (SEQ ID NO. 24). The amplified products are precipitated, purified with Microcon-100, cut with *sf*I and cloned into the *sf*I site of the fUSE5 vector (71, 72). Amplification of the IgE-TCL follows the methods described by Smith and Scott (71), the details which are given in the manual supplied with the fUSE expression kit by Smith (72).

Starting on page 16, line 6 and ending on page 16, line 8 replace the paragraph with:

B¹¹
Primer No.1: 5'-GACGTGGCCTGTN6-3' (SEQ ID NO. 25) and primer No. 2: 5'-GGCCGACGTGGCCTGT-3' (SEQ ID NO. 26) are used to generate a constrained IgE-TCL.

Starting on page 16, line 19 and ending on page 16, line 23 replace the paragraph with:

B¹²
The phages are amplified using the K91 kan bacteria and partially purified by precipitation with polyethylene glycol (72). The panning is repeated for two more rounds. Sequences carried by the selected phage are then determined using the Sequenase kit (United States Biochemical) with the primer 5'-CCCTCATAGTTAAGCGTAACG-3' (73) (SEQ ID NO. 27).

REMARKS

The application has been amended to insert sequence identifiers and a substitute Sequence Listing in connection with this response to the Notice to Comply. Enclosed are marked-up copies of the original pages of the application bearing the modified paragraph; the amendments inserting SEQ ID NOs are indicated with red ink. Also enclosed are replacement pages of the specification that include the SEQ ID NOs. Thus, the amendments to the specification address informalities and, as such, do not add new matter. Accordingly, entry of the amendments is respectfully requested.

The enclosed paper and computer readable copies of the substitute Sequence Listing are identical and do not add new matter. An executed statement under 37 C.F.R. §1.821 (f) and (g)